TABLE OF CONTENTS - VOLUME 21

A Highly Specific Radioimmunoassay for Progesterone Using Antibodies Covalently Linked to Arylamine-Glass Particles. F. H. BODLEY, A. CHAPDELAINE, G. FLICKINGER, G. MIKHAIL, S. YAVERBAUM and K. D. ROBERTS. 1

Bioconversion of the Androgen Precursors by Pre- and Post-Pubertal Rat Testes with Special Reference to Local Irradiation and Gonadotropin Stimulation. D. GUPTA, K. RAGER, G. PFISTER and W. VOGT. 17

Determination of Serum Testosterone and Androstanediol by Competitive Protein Binding. A. L. STRICKLAND, M. APLAND and J. BRUTON 27

19-Hydroxy Steroids. V[1]. 3β,7α,19-Trihydroxy-5-Androsten-17-One 3,19-Diacetate: A Potential Precursor in the Biosynthesis of B-Ring Unsaturated Estrogens. PETER MORAND and A. VAN TONGERLOO 47

19-Hydroxy Steroids. VI[1]. Approaches to the Synthesis of 7,19-Disubstituted Androgens. PETER MORAND and A. VAN TONGERLOO. 65

Metabolism of ^{3}H-Digitoxigenin by Rat Liver, Adrenal, and Ovary Homogenates. R. E. TALCOTT, W. H. BULGER and S. J. STOHS . . . . . .

The Subcellular Localization of the Changes in Ribonuclease and Phosphatase Activities of the Mouse Kidney Produced by Castration and Testosterone. CHARLES D. KOCHAKIAN and B. ROGER WILLIAMS. 95

A Radioimmunoassay of Androstenedione. IAN H. THORNEYCROFT, WALTER O. RIBEIRO, SERGIO C. STONE and STEPHEN A. TILLSON 111

Isolation of 16α-Hydroxy-2-Methoxyestrone from Rat Bile. HISAKO WATANABE and J. ALLAN MENZIES. 123

Effects of Norethindrone (17-ethynyl-17β-hydroxy-4-estren-3-one) and Norgestrel (dl-13β-ethyl-17-ethynyl-17β-hydroxy-4-gonen-3-one) on the Tissue Distribution of ^{3}H-Estradiol-17β in Ovariectomized Rats. R. C. BANERJEE, P. BRAZEAU, JR., R. SAUCIER and S. M. HUSAIN. 133

Steroids and Related Products. XXXVII. 11-AZA Steroids. Part II. The Synthesis of 11-AZA 9β-Steroids. I. R. C. RASTOGI, M. N. ROY CHOWDHURY and CH. R. ENGEL 147

A Non-Chromatographic Radioimmunoassay for Plasma Aldosterone. BRIAN T. MARTIN and CHARLES A. NUGENT 169

Mass Spectral Studies on Steroidal Compounds - III 6-AZA Compounds in the Cholestane Series (Ring Bε-Lactams). M. S. AHMAD, M. MUSHFIQ and SHAFIULLAH 181

Hydrolysis and Decomposition of Urinary Pregnanediol in Acid. MARY G. METCALF 193

A Simple Chemical Method for the Synthesis of Catechol Estrogens. H. P. GELBKE, O. HAUPT and R. KNUPPEN 205

Steroid Extraction and Tissue Digestion in the Assay of Radioactivity in Rat Brain Following Tritiated Estradiol - 17β. RICHARD E. WHALEN, BORIS B. GORZALKA and WILLIAM G. LUTTGE 219

The *in vitro* Biosynthesis and Metabolism of Progesterone and Estrogens by Chimpanzee Placental Tissue. TAKAO SHINADA and KENNETH J. RYAN 233

A Novel Regiospecific Peroxide Catalyzed Halogen Exchange. 5-Bromo-6β-Chloro-5α-Cholestan-3β-Ol 3 Acetate. V. HACH 245

Influence of Rat Estradiol Binding Plasma Protein (EBP) on Uterotrophic Activity. JEAN-PIERRE RAYNAUD. 249

Factors Involved in the Production of Specific Antibodies to Estriol and Estradiol. CARL S. WALKER, STANLEY J. CLARK and HERBERT H. WOTIZ 259

Radioimmunoassay of Urinary Testosterone Glucuronoside. JOHN F. HENNAM, WILLIAM P. COLLINS and IAN F. SOMMERVILLE . . . 285

The Metabolism of Androgens in Rat Preputial Glands. M. B. HODGINS and J. B. HAY 307

Errata. 323

Steroid Release from Polymer Vaginal Devices. Effect on Fertility Inhibition. JUAN ZANARTU and RODOLFO GUERRERO. . . . 325

Competitive Protein Binding Assay of Progesterone without Chromatography. MARIE-FRANCE PICHON and EDWIN MILGROM. 335

Determination of Estriol, Estriol Sulfate, Progesterone and Neutral Steroid Mono- and Disulfates in Umbilical Cord Blood Plasma. T. LAATIKAINEN, J. PELTONEN and P. NYLANDER. . . 347

Steroids and Related Products. XXXVIII. 11-AZA Steroids. III. The Synthesis of 11-AZA 9α-Steroids. I. M. N. ROY CHOWDHURY, V. S. SALVI, R. C. RASTOGI, S. RAKHIT and CH. R. ENGEL. 361

Complex Formation by ^{3}H-Aldosterone in Rat Kidney and Liver. DAVID J. MORRIS and ROBERT P. DAVIS 383

Sex-Dependence of the Metabolism of Aldosterone in Adrenalectomized and Intact Rats. DAVID J. MORRIS, JONATHAN S. BEREK and ROBERT P. DAVIS 397

Fluorimetric Estimation of Testosterone and Epi-Testosterone in Urine and Plasma. W. EECHAUTE, G. DEMEESTER and I. LEUSEN . 409

Further Studies on the Temperature Dependence of the Binding of Testosterone to Human Pregnancy Plasma Proteins. R. A. LUTZ, L. LUTZ-EWAN and H. G. WEDER. 423

The Development of Daily Changes in Serum Corticosterone in Pre-Weanling Rats. JUDITH A. RAMALEY 433

Biologic Activity of 16α-Methyldichlorisone-17-Butyrate in the Rat and Dog. ELLIOTT J. COLLINS, J. ASCHENBRENNER and M. NAKAHAMA 443

An Androgen Binding Protein in the Testis Cytosol Fraction of Adult Rats. Comparison with the Androgen Binding Protein in the Epididymis. V. HANSSON, O. DJOSELAND, E. REUSCH, A. ATTRAMADAL and O. TORGERSEN. 457

Steroid Modifications II. The Effect of Ruthenium Tetroxide on Several Aromatic Steroids. DAVID M. PIATAK and OLUSEGUN EKUNDAYO 475

Conversion of Cholesterol to Progesterone by Turtle Corpus Luteum. JOHN KLICKA and I. Y. MAHMOUD 483

Cortisol and Cortisone Levels in Umbilical Cord Plasma and Maternal Plasma of Normal Pregnancies. ROBYN A. DORMER and JOHN T. FRANCE. 497

Identification and Quantification of Unconjugated Neutral Steroids in Adrenal and Liver Tissue of Early and Mid-Term Human Fetuses. I. HUHTANIEMI. 511

The Epimeric 20-Hydroperoxy-5-Pregnen-3β-Ols: Thermal and Enzymatic Decomposition. JOHAN E. VAN LIER, GORDON KAN and REJEAN LANGLOIS 521

Effect of Estradiol on the Metabolism of Testosterone by Rat Prostate. MONTSERRAT deM. FENCL and CLAUDE A. VILLEE . . . 537

The Effect of ACTH Administration on Plasma Testosterone, Dihydrotestosterone and Serum LH Concentrations in Normal Men. INESE Z. BEITINS, FRANCIS BAYARD, AVINOAM KOWARSKI and CLAUDE J. MIGEON. 553

Competitive Protein-Binding Assay of Estrone, Estradiol-17β or Estradiol-17α in Human or Ruminant Plasma. D. A. SHUTT and R. I. COX 565

The Effect of Human Chorionic Gonadotropin on Plasma Steroid Levels in Young and Old Men. CHRISTOPHER LONGCOPE. . . 583

Characterization of an Androgen Binding Protein (ABP) in Rat Testis and Epididymis. E. MARTIN RITZEN, M. CATHERINE DOBBINS, DONALD J. TINDALL, FRANK S. FRENCH and SHIHADEH N. NAYFEH. 593

Towards an Ecdysone Synthesis. 20β-Acetoxy-5α-Pregna-2,7-Dien-6-One. W. B. SMITH, G. P. NEWSOROFF and N. Y. WU. 609

Isolation and Identification of 16α, 18-Dihydroxydeoxy-corticosterone from Human Adrenal Gland Incubations. S. L. DALE and J. C. MELBY. 617

The Occurrence and Subcellular Localization of 3α-Hydroxy-steroid Dehydrogenase in Adult Rat Brain. CHARLES W. MARTIN and HAROLD J. NICHOLAS. 633

Human Prostatic Dehydroepiandrosterone Sulfate Sulfatase. WELLS E. FARNSWORTH 647

A Chemical Method for the Quantitative Determination of 2-Hydroxyestrone in Human Urine. H. P. GELBKE, M. KRETH and R. KNUPPEN. 665

Synthesis of Specific Phenazine Derivatives of 2-Hydroxy-estrogens. H. P. GELBKE and R. KNUPPEN 689

Search for a Substance which Selectively Inhibits FSH - Effects of Steroids and Prostaglandins on Serum FSH and LH Levels. R. S. SWERDLOFF, P. K. GROVER, H. S. JACOBS and J. BAIN 703

Preparation of Some C_{19} Steroid-Protein Conjugates. R. S. ROSENFELD, BURTON ROSENBERG, JACOB KREAM and LEON HELLMAN. 723

Some Observations on the Determination of Testosterone in Human Plasma by Radioimmunoassay Using Antisera Raised Against Testosterone-3-BSA and Testosterone-11α-BSA. STEPHEN G. HILLIER, BRIAN G. BROWNSEY and EUAN H. D. CAMERON. . 735

Comparative Specificity of Antisera Raised Against Estrone, Estradiol-17β And Estriol Using 6-O-Carboxy-Methyloxime Bovine Serum Albumin Derivatives. K. WRIGHT, D. C. COLLINS and J. R. K. PREEDY 755

Errata. 770

Book Review 771

Book Review 772

Androgen Metabolism by Rat Epididymis. I. Metabolic Conversion of ^{3}H-testosterone *in vivo*. O. DJOSELAND, V. HANSSON and H. N. HAUGEN 773

Steroid 17,20-lyase: The Effect of Detergents on Enzymic Activity and Microsomal Composition. GEORGE BETZ and DAWN MICHELS. 785

Reduced High Affinity 5α-Dihydrotestosterone Receptor Capacity in the Ventral Prostate of the Aging Rat. SYDNEY A. SHAIN and LEONARD R. AXELROD. 801

Comparative Placental Steroid Synthesis. II. C_{19} Steroid Metabolism by Guinea-Pig Placentas and Fetal Adrenals *in vitro*. STANLEY B. GROSSMAN and ERIC BLOCH. 813

Radioimmunoassay for Prednisolone. W. A. COLBURN and R. H. BULLER. 833

Properties of Antisera to Progesterone and to 17-Hydroxy-progesterone Elicited by Immunization with the Steroids Attached to Protein through Position 7. S. BAUMINGER. H. R. LINDNER and A. WEINSTEIN. 847

Steroids and Related Products. XXXIX. The Functional-ization of the 17-Methyl Group of 17α-Methyl Steroids. II. The Synthesis of 12α,17[1]-Epoxy-17α-Methylprogesterone and of 20-Oxygenated 17α-Hydroxymethyl Steroids. CH. R. ENGEL, D. MUKHERJEE and G. J. BEAUDOIN 857

Roussel Prize 876